ILLINOIS INBRED LINES OF CORN RELEASED IN 1960

Plus Information on Lines Previously Released

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DEVELOPMENT AND EVALUATION of better-performing inbred lines and hybrids of dent corn remain an important objective of the Illinois Agricultural Experiment Station. This report provides information on Illinois inbred lines available to seedsmen. These lines are listed in Table 1.

Twenty-one of these inbred lines become available to private growers upon the publication of this report. The others were released at various times prior to 1960; two of this group are now obsolete. Typical ears are shown in Figures 1 and 2.

Agronomic and pathologic information on 41 of the inbred lines is reported in Table 7, page 16. Most of the data are averages of 1957-1959. Similar data on seven selected widely used inbreds from other states are reported for comparison. Small plots and limited environmental conditions make it advisable to use these data only as approximate guides.

Some of the inbred lines listed in Table 7 were developed for special purposes. Inbred lines with excellent resistance to first-brood European corn borer include R71, R74, R109B, R112, R113, R168, and R172. Lines with high oil or protein content are R75, R76, R78, R84, R158, R182, R193, R196, and R197. R138 is similar to Hy2 but is a genetic restorer for "T" type of male sterility. Use of this line eliminates the need for detasseling and blending in hybrid seed production. R909 and R909msT are dwarf inbred lines.

Release Policy. The University of Illinois does not produce hybrid seed corn in commercial quantities. Hybrids that include new inbred lines may be produced under the "delayed-release" program approved by the directors of the 12 North Central agricultural experiment stations. Multiplication of a new line is handled by the Illinois Station, and the production of single crosses in quantity is handled by the Illinois Seed Producers Association, Champaign, Illinois. If a new Illinois experimental hybrid gives satisfactory performance, the parental lines eventually are released for use by seedsmen.

In order to make the results of corn research more quickly available to the public, the University of Illinois has adopted a slight modification of the "delayed-release" policy as it pertains to Illinois-developed inbred lines. Inbred lines of corn developed by the Uni-

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versity of Illinois may be released to the public when they have demonstrated superior combining ability for yield, standability, disease resistance, insect resistance, chemical composition, male sterility, genic pollen restoration, dwarfness, or other characters. Such Illinois lines may form a part of a new hybrid or be used in other ways by corn

Table 1. — Inbred Lines of Dent Corn Released to Private Growers From the Illinois Agricultural Experiment Station

Inbred line	Seed color[1]	Developed and evaluated by[2]	Origin
		Released in 1960	
R74	Y	RWJ	44-2B (Snelling Corn Borer Synthetic)
R101	Y	RWJ	69 (Stiff Stalk Synthetic)
R103	Y	RWJ	60-5A (Snelling Corn Borer Synthetic)
R105	Y	RWJ	84A (Snelling Corn Borer Synthetic)
R112	Y	RWJ	237 (Stiff Stalk Synthetic)
R134	LY	LFB,DEA,RWJ	(Mo2RF x K201) x Mo2RF
R138	Y	LFB,DEA,RWJ	(Hy2 x K55) x Hy2
R151	Y	RWJ	59A (Snelling Corn Borer Synthetic)
R153	Y	RWJ	86B (Snelling Corn Borer Synthetic)
R154	Y	RWJ	138A (Snelling Corn Borer Synthetic)
R158	Y	RWJ,CMW	(Illinois High Protein x Hy) x Hy
R159	Y	RWJ	256 (Illinois Synthetic)
R172	Y	RWJ	76-3A (Snelling Corn Borer Synthetic)
R174	Y	RWJ	150-4A (Snelling Corn Borer Synthetic)
R177	Y	RWJ	230B (Snelling Corn Borer Synthetic)
R182	Y	RWJ	R75 x Oh51A
R192	Y	RWJ	303 (Illinois Synthetic)
R193	Y	RWJ	B2 x Oh51A
R194	Y	RWJ	272 (Illinois Synthetic)
R196	Y	RWJ	Hy2 x R83
R197	Y	RWJ	R80 x K201
		Released prior to 1960	
A	Y	JRH	Funk Yellow Dent
Hy	Y	JRH	Illinois High Yield
Hy2	Y	CMW	Selected from Illinois Hy
K (obsolete)	Y	JRH	Hayes Golden
L (obsolete)	Y	JRH	Mann Leaming
R2	Y	.....	Reid x Krug Yellow Dent
R4	Y	JRH	Funk Yellow Dent
M14	Y	BM	BR10 x R8
R30	W	CMW	Champion White Pearl
R53	Y	ERL	(A375 x M13) x 187-2
R59	Y	OB	L317 x Illinois Low Ear
R61	Y	OB	Commercial Hybrid x Lancaster Line
R71	Y	RWJ	35-2B (Snelling Corn Borer Synthetic)
R75	Y	RWJ,CMW	(Illinois High Oil x WF9) x WF9
R76	Y	RWJ,CMW	(Illinois High Oil x 38-11) x 38-11
R78	Y	RWJ,CMW	(Illinois High Oil x Hy) x Illinois High Oil
R84	Y	RWJ,CMW	(Illinois High Oil x 187-2) x Illinois High Oil
90	Y	JRH	Funk Yellow Dent
R109B	Y	RWJ	200 (Snelling Corn Borer Synthetic)
R113	Y	RWJ	296 (Stiff Stalk Synthetic)
R168	Y	RWJ	360 (Illinois Synthetic)
4226	Y	WJM	Funk 90 Day
5120	Y	WJM	Illinois High Yield
5120B	Y	CMW	Selected from Illinois 5120
R909	Y	ERL	*brachytic*-2 dwarf recovery of WF9
R909msT	Y	ERL	"Texas" cytoplasmic male-sterile version of R909

[1] Y—yellow, W—white, LY—light yellow.

[2] RWJ—R. W. Jugenheimer; LFB—L. F. Bauman; DEA—D. E. Alexander; CMW—C. M. Woodworth; JRH—J. R. Holbert; BM—Ben Moews; ERL—E. R. Leng; OB—Oren Bolin; WJM—W. J. Mumm.

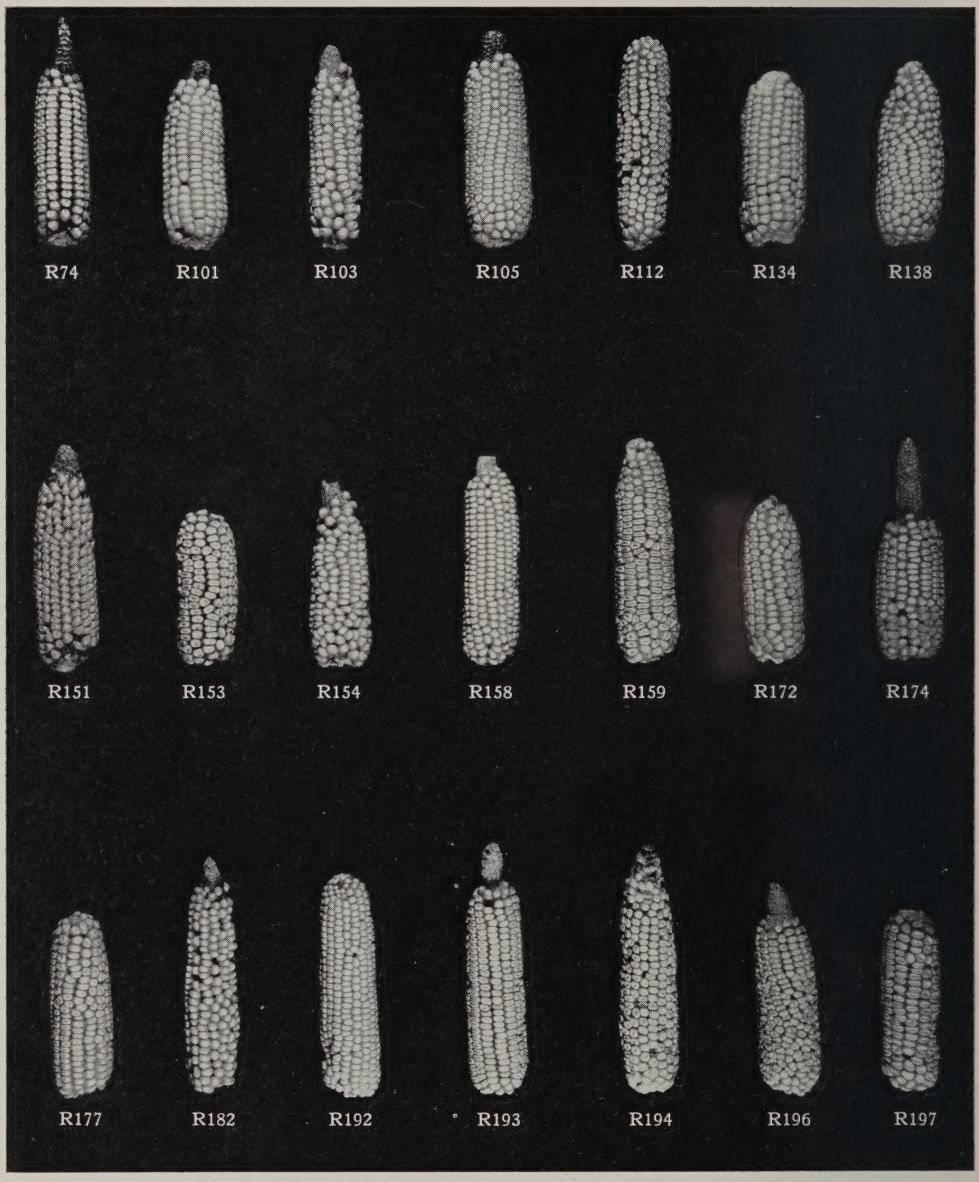

Fig. 1. — Typical ears of Illinois inbred lines released in 1960.

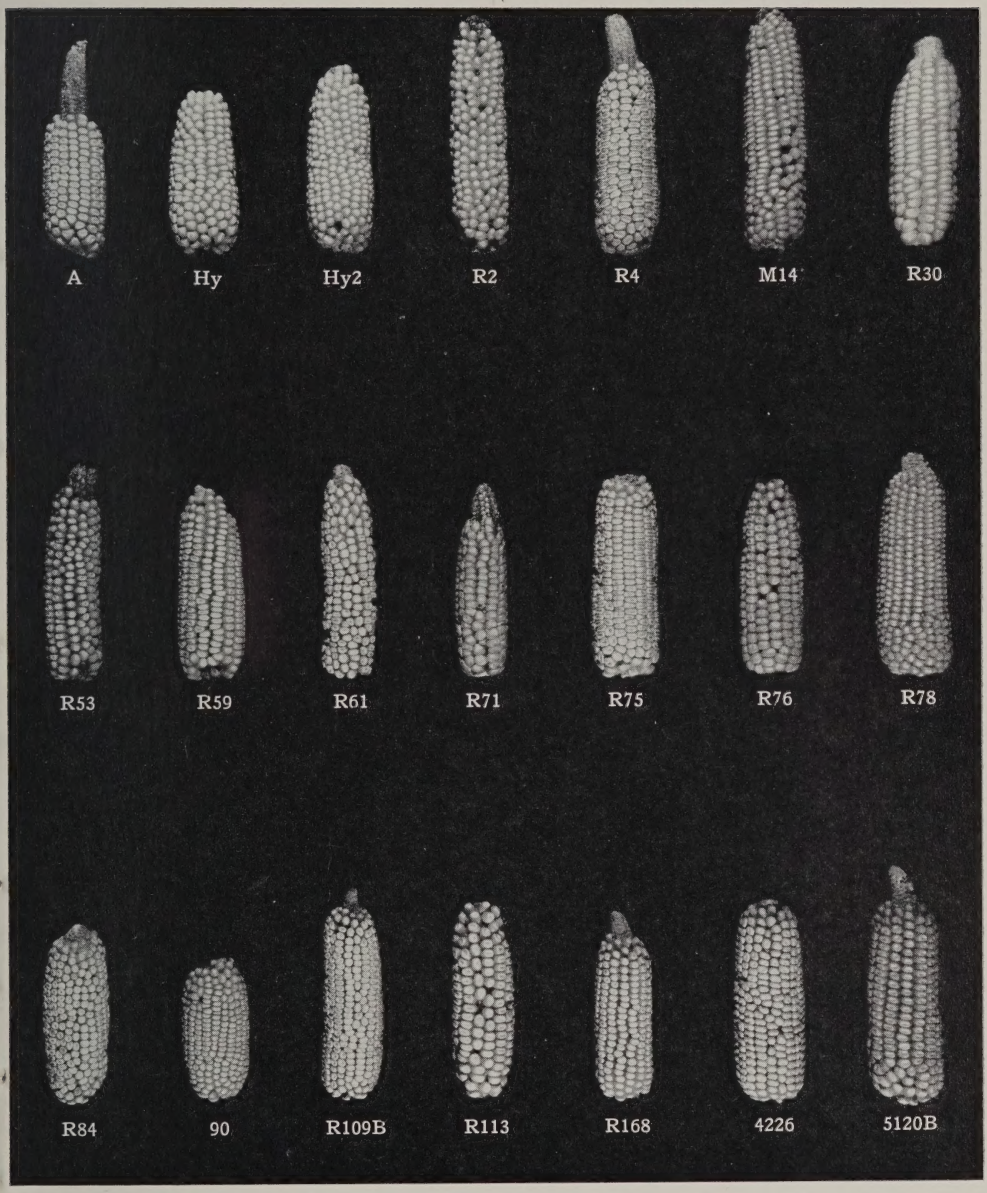

Fig. 2. — Typical ears of Illinois inbred lines released prior to 1960.

breeders. Inbred lines of corn developed by others will not be released without their approval.

Hand-pollinated seed of released Illinois inbred lines usually is available for a fee in packets containing 25 to 100 kernels. New releases are announced annually about April 1. Inquiries may be addressed to the Agronomy Department, University of Illinois, Urbana, Illinois. Citizens of Illinois have priority in case of seed shortage.

Performance in Hybrids. Most corn breeders have found a correlation between the characteristics of inbred lines and their hybrid progeny. Final evaluation of inbred lines, however, can be determined best by hybrid performance. The performance of the newer available Illinois inbred lines in hybrid combinations has been published in Illinois Agricultural Experiment Station Bulletins. These hybrids included top crosses, single crosses, three-way crosses, and double crosses. Table 2 shows where such performance-test data may be found for 1955 to 1959.

Extensive three-way-cross data are shown in Tables 3 through 6. Inbred lines include R71, R74, R76, R78, R84, R101, R109B, R112, R113, R134, R151, R154, R158, R159, R168, R172, R182, R192, R193, R194, R196, and R197. Each of these lines, crossed with WF9xOh43, WF9xB37, and B41xOh7A, was evaluated in replicated trials in northern, central, and south-central Illinois.

Prediction Studies. The making and testing of all possible hybrid combinations among available inbred lines is a tremendous task. For example, it is possible to produce 100 top crosses, 4,950 single crosses, 4,950 three-way crosses, and 11,763,625 double crosses with only 100 inbred lines.

Prediction studies are consequently an extremely valuable part of a corn-research program. Methods are available that enable corn breeders to predict the performance of the better hybrid combinations without making and testing literally thousands of undesirable crosses. Predicted hybrid combinations, however, should always be thoroughly tested under field conditions before being put into commercial production.

Three-way crosses provide useful predictions of the performance of double-cross hybrids. A large number of inbred lines can be compared, and the method is especially valuable where a desirable seed-parent single cross is available for use as a tester. Three-way crosses provide information on specific hybrids and often eliminate the time and expense required for testing inbred lines in top crosses and single crosses.

The data reported in Tables 3 through 6 permit predicting the performance of 231 different double-cross hybrids with each tester and at three locations. Study of Table 3A shows that three-way cross R134x(WF9xOh43) yielded 136 bushels per acre, and that three-way cross R151x(WF9xOh43) yielded 134 bushels per acre. The predicted yield of double cross (R134xR151)x(WF9xOh43) is 135 bushels per acre (136 + 134 divided by 2). Similarly, a low-yielding double-cross hybrid would be (R74xR84)x(WF9xOh43) with a predicted yield of 97 bushels per acre (99 + 95 divided by 2). Similar predictions can be made for other characters such as standability.

Table 2. — Tables in Station Bulletins in Which Performance of the Newer Available Illinois Inbred Lines in Hybrid Combinations Is Shown

(Dates indicate year of test)

Inbred line	Bulletin 652 (1959)	Bulletin 636 (1958)	Bulletin 623 (1957)	Bulletin 606 (1956)	Bulletin 597 (1955)
		Released in 1960 (table numbers)			
R74	2,3,4,6,8,10,12,13	6,13	9,13,14,17		5,8,10,12
R101	3,4,6,8,10,12,13	6,13	17	8,10	5,10,12
R103	6	5,6	9,10	6,11	6
R105	4,6,10	4,6,13	6,9,10,17	4,5,8,10	5,8,10,12
R112	2,3,8,12,13		14		
R134	3,8,10,11,12,13				
R138	5,9	11			6,11
R151	3,6,8,10,12,13	3,4,6,7,13,14	9,10,17	4,6,8,10,11	4,6,11,12
R153	6,10	6,7,13	9,10,12,17,18,20	5,8,10	4,6,11
R154	3,6,8,10,12,13	6,13,14	9,10,12,13,17,18,20	4,6,8,10,11	4,8,11,12
R158	2,3,8,9,12,13,14	10,11			
R159	3,8,12,13		12,18,20		3,7
R172	2,3,4,8,12,13		3,4,7		
R174		5			
R177		9			
R182	3,8,12,13,14	3,10			
R192	3,8,12,13				
R193	3,8,12,13	10			
R194	3,8,12,13				
R196	3,7,8,12,13	10			
R197	3,8,11,12,13	10			
		Released prior to 1960 (table numbers)			
R71	2,3,4,6,8,12,13	2,4,6,7,	2,6,9,10,13,14,17	4,5,10	5,8,10
R75	6,9,10,14	4,6,8,10,12,13,15	6,9,11,17	4,6,10	5,6,8,10,12
R76	3,7,8,9,12,13,14	8,10,12,15	11		
R78	3,7,8,12,13,14	8,10,15	11		
R84	3,7,8,9,12,13,14	8,10,11,12,15	11		12
R109B	2,3,4,6,8,12,13	2,4,6	2,6,7,9,14		8,12
R113	2,3,8,12,13	2	2,4,7,12,13,14,18,20		5
R168	2,3,4,6,8,12,13	2,4,6	2,3,4,6,7,9,12,13,14,18	4	3,7,10

Table 3. — THREE-WAY CROSSES AND STANDARDS
Tested in Northern Illinois, 1959

(Data in **boldface** were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut	Leaf blight
							Plant	Ear			
A — Inbred lines crossed with (WF9 × Oh43)											
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*	*score*
1	R71	114	28	**82**	**97**	**98**	**84**	**38**	**3**	**3**	4.0
2	R74	99	26	**80**	**92**	**97**	88	**36**	**0**	**3**	**2.0**
4	R76	111	26	79	69	**95**	94	48	10	**2**	**2.0**
5	R78	116	27	**82**	**89**	**94**	88	**41**	**3**	**3**	**2.0**
6	R84	95	25	**80**	**82**	88	88	46	7	11	3.0
7	R101	105	25	79	**93**	**97**	91	**40**	**0**	9	4.0
9	R109B	109	26	**82**	**97**	**93**	88	42	**0**	**1**	3.0
10	R112	115	25	**83**	**96**	**96**	94	**40**	**5**	10	2.5
11	R113	113	24	79	**82**	**100**	**84**	**40**	**1**	**3**	2.5
14	R134	**136**	27	79	**93**	92	96	46	**4**	**3**	**2.0**
16	R151	**134**	27	**82**	**83**	**99**	92	42	**5**	**2**	3.0
17	R154	**134**	24	**80**	**86**	92	96	42	**2**	**2**	2.5
18	R158	107	24	**81**	**92**	**100**	98	42	**6**	**1**	2.5
19	R159	107	28	**80**	**88**	**97**	86	**40**	**2**	**1**	2.5
21	R168	**123**	23	**82**	**92**	**99**	86	**41**	**0**	**2**	**2.0**
22	R172	**125**	25	**81**	**94**	**99**	90	42	**0**	**0**	**1.5**
25	R182	109	25	**81**	**96**	92	96	**41**	**4**	**4**	3.0
27	R192	101	26	79	**90**	**99**	96	44	**2**	15	3.0
28	R193	115	26	**80**	**93**	**98**	92	**40**	**4**	**5**	2.5
29	R194	100	28	79	77	**99**	88	42	**3**	**2**	**2.0**
31	R196	104	25	**80**	**96**	**100**	92	44	**3**	**0**	3.5
32	R197	117	29	**80**	**85**	**98**	93	47	**6**	**0**	2.5
	Average	113	26	80	85	96	91	42	3	4	2.7
B — Single crosses											
34	WF9×Oh43	108	27	**81**	**94**	**98**	87	**39**	**6**	**3**	2.5
35	WF9×B37	95	28	75	**98**	**100**	92	42	**5**	9	3.5
36	B41×Oh7A	71	32	74	56	**94**	94	51	**1**	**1**	4.0
	Average	91	29	77	83	97	91	44	4	4	3.3
C — Inbred lines crossed with (WF9 × B37)											
1	R71	103	29	75	**99**	89	**94**	48	**4**	**2**	4.0
2	R74	95	29	76	**100**	69	**93**	**45**	**3**	**7**	2.5
4	R76	93	27	75	**90**	**96**	**96**	52	**6**	12	3.0
5	R78	101	28	**78**	84	**95**	**94**	**41**	**3**	**9**	2.0
6	R84	73	**25**	75	**89**	**96**	**96**	50	**3**	12	4.5
7	R101	85	**25**	75	**89**	**98**	**92**	**46**	**0**	**7**	3.5
9	R109B	103	27	77	**99**	**97**	**94**	**46**	**2**	**4**	2.5
10	R112	**109**	26	**80**	**98**	**100**	**90**	48	**6**	**6**	2.5
11	R113	106	**24**	76	**93**	**100**	**91**	50	**2**	**1**	3.0
14	R134	**108**	28	74	**94**	**95**	**96**	**46**	10	**8**	2.0
16	R151	**130**	29	**79**	**91**	**99**	98	53	**6**	**0**	2.5
17	R154	**122**	26	**79**	78	**97**	**96**	52	**1**	**0**	2.5
18	R158	91	**25**	77	**90**	89	98	48	**5**	**3**	4.5
19	R159	97	27	76	**94**	**100**	**93**	50	**1**	**6**	**1.0**
21	R168	**125**	**25**	**78**	**99**	**98**	**90**	**45**	**0**	**8**	2.5
22	R172	**107**	26	76	**95**	**100**	**92**	49	**1**	**1**	**1.5**
25	R182	82	**24**	76	**97**	68	98	48	**3**	**7**	2.5
27	R192	104	27	76	87	**96**	98	50	**0**	12	2.0
28	R193	96	28	76	**91**	**100**	**94**	**47**	**4**	**3**	2.5
29	R194	**109**	30	77	**96**	**96**	**93**	52	**3**	**7**	2.0
31	R196	**118**	26	76	**94**	**99**	97	50	**2**	**7**	2.5
32	R197	**125**	31	77	78	**98**	**95**	52	**2**	**5**	2.5
	Average	104	27	76	92	94	94	48	3	6	2.6

(Table is concluded on next page)

Table 3. — Concluded

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut	Leaf blight
							Plant	Ear			
	D — single crosses										
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*	*score*
34	WF9×Oh43....	100	28	76	**97**	**98**	**92**	**42**	**5**	**3**	2.0
35	WF9×B37.....	85	28	74	**99**	**96**	**90**	48	**4**	15	2.5
36	B41×Oh7A....	24	35	66	42	**97**	**91**	50	**0**	**0**	4.0
	Average...	70	30	72	79	97	91	47	3	6	2.8
	E — Inbred lines crossed with (B41 × Oh7A)										
1	R71.....	80	31	78	**89**	**98**	90	**48**	**2**	**4**	3.5
2	R74.....	**119**	28	77	**92**	**99**	92	**49**	**1**	**2**	2.0
4	R76.....	**105**	30	74	76	**100**	98	52	**2**	9	2.5
5	R78.....	63	31	77	59	**100**	92	50	**0**	8	2.5
6	R84.....	41	29	76	**82**	**98**	90	54	6	10	3.0
7	R101.....	79	26	77	80	**99**	91	50	**3**	**3**	4.0
9	R109B.....	**105**	30	79	**93**	**100**	92	52	**2**	**7**	2.5
10	R112.....	91	28	78	**95**	**99**	92	**45**	**3**	10	**1.0**
11	R113.....	78	**25**	77	**94**	**99**	**87**	**49**	**1**	**1**	2.5
14	R134.....	97	30	**80**	**85**	**100**	93	**49**	13	**3**	**1.5**
16	R151.....	**122**	28	79	75	**100**	97	52	8	**2**	2.0
17	R154.....	**107**	27	79	80	**100**	96	54	6	**2**	2.5
18	R158.....	92	27	78	**93**	94	96	51	**3**	**0**	3.5
19	R159.....	71	33	75	**95**	**100**	94	**48**	**1**	**6**	**1.0**
21	R168.....	**108**	26	**83**	**97**	**100**	**88**	**46**	**1**	**4**	**1.5**
22	R172.....	95	26	78	**86**	**99**	94	54	**1**	**5**	**1.0**
25	R182.....	94	27	79	**94**	**98**	94	**48**	**3**	**0**	**1.5**
27	R192.....	70	29	75	**85**	97	92	50	**0**	9	3.0
28	R193.....	87	27	75	**86**	**100**	91	**46**	6	**1**	2.5
29	R194.....	47	34	78	**92**	**100**	90	50	**4**	**5**	2.5
31	R196.....	78	28	75	**84**	**98**	92	54	**3**	**2**	2.5
32	R197.....	**106**	30	77	**84**	**100**	92	52	**2**	**0**	2.5
	Average...	88	29	77	86	99	92	50	3	4	2.3
	F — Single crosses										
34	WF9×Oh43....	104	28	**81**	**95**	**99**	89	**42**	**5**	**1**	**1.0**
35	WF9×B37.....	72	27	74	**94**	**100**	92	**47**	**1**	10	2.0
36	B41×Oh7A....	41	34	72	42	**99**	90	50	**1**	**2**	2.5
	Average...	72	30	76	77	99	90	46	2	4	1.8
	G — Mean of inbred lines crossed with three testers										
1	R71.....	99	29	78	**95**	95	**89**	**45**	**3**	**3**	3.8
2	R74.....	104	28	78	**95**	88	91	**43**	**1**	**4**	**2.2**
4	R76.....	103	28	76	78	**97**	96	51	6	8	2.5
5	R78.....	93	29	79	77	96	91	**44**	**2**	7	**2.2**
6	R84.....	70	26	77	84	94	91	50	5	11	3.5
7	R101.....	90	25	77	87	**98**	91	**45**	**1**	6	3.8
9	R109B.....	105	28	79	**96**	**97**	91	47	**1**	**4**	2.7
10	R112.....	105	26	**80**	**96**	**98**	92	**44**	5	9	**2.0**
11	R113.....	99	24	77	**90**	**99**	**87**	46	**1**	**2**	2.7
14	R134.....	114	28	78	**91**	96	95	47	9	**5**	**1.8**
16	R151.....	**129**	28	**80**	83	**99**	96	49	6	**1**	2.5
17	R154.....	**121**	26	79	81	96	96	49	**3**	**1**	2.5
18	R158.....	97	25	79	**92**	94	97	47	5	**1**	3.5
19	R159.....	92	29	77	**92**	**99**	91	46	**1**	**4**	**1.5**
21	R168.....	**119**	25	**81**	**96**	**99**	**88**	**44**	**0**	**5**	**2.0**
22	R172.....	109	26	78	**92**	**99**	92	48	**1**	**2**	**1.3**
25	R182.....	95	25	79	**96**	86	96	46	**3**	**4**	2.3
27	R192.....	92	27	77	87	**97**	95	48	**1**	12	2.7
28	R193.....	99	27	77	**90**	**99**	92	**44**	5	**3**	2.5
29	R194.....	85	31	78	**88**	**98**	90	48	**3**	**5**	**2.2**
31	R196.....	100	26	77	**91**	**99**	94	49	**3**	**3**	2.8
32	R197.....	116	30	78	82	**99**	93	50	**3**	**2**	2.5
	Average...	102	27	78	89	96	92	47	3	5	2.5
	H — Mean of three single-cross testers										
34	WF9×Oh43....	104	28	79	**95**	**98**	**89**	**41**	5	**2**	**1.8**
35	WF9×B37.....	84	28	74	**97**	**99**	91	46	**3**	11	2.7
36	B41×Oh7A....	45	34	71	47	**97**	92	50	**1**	**1**	3.5
	Average...	78	30	75	80	98	91	46	3	5	2.7

Table 4. — THREE-WAY CROSSES AND STANDARDS Tested in Central Illinois, 1959

(Data in **boldface** were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
	A — Inbred lines crossed with (WF9 × Oh43)									
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*
1	R71	**91**	**20**	80	**90**	**100**	**67**	**31**	**1**	**4**
2	R74	65	22	77	**92**	**99**	**66**	**29**	**0**	**1**
4	R76	**86**	22	78	79	89	77	38	4	**7**
5	R78	77	23	**81**	68	**95**	70	**33**	4	**5**
6	R84	67	21	80	**89**	**98**	**68**	**33**	**2**	**5**
7	R101	81	21	79	**81**	**99**	70	**32**	**1**	9
9	R109B	79	23	79	**94**	88	**69**	**31**	**1**	**1**
10	R112	**88**	**20**	**82**	76	**95**	**67**	**27**	**2**	**7**
11	R113	68	21	74	**84**	**97**	**67**	**31**	**0**	**5**
14	R134	**88**	21	78	**92**	**94**	79	36	**1**	**2**
16	R151	**101**	22	**82**	**90**	**99**	74	**32**	**1**	**5**
17	R154	**95**	21	**82**	62	**98**	71	**31**	**0**	**5**
18	R158	77	**19**	**83**	**92**	**100**	75	**33**	5	**2**
19	R159	56	22	76	**98**	**98**	**62**	**26**	**0**	**2**
21	R168	**89**	**19**	**84**	**85**	**99**	**68**	**28**	**3**	**5**
22	R172	**94**	21	**82**	**89**	**100**	72	36	**0**	**4**
25	R182	62	**20**	79	**94**	**97**	70	**33**	**3**	**2**
27	R192	**86**	23	79	**85**	**99**	71	**28**	**0**	**4**
28	R193	77	**20**	79	74	**98**	71	**29**	**0**	**3**
29	R194	78	23	79	77	**99**	70	**33**	**0**	**3**
31	R196	75	21	79	**92**	**98**	72	35	4	**4**
32	R197	**96**	23	80	**85**	**93**	73	35	**1**	**2**
	Average	81	21	80	85	97	70	32	2	4
	B — Single crosses									
34	WF9×Oh43	**97**	**19**	**81**	**92**	**97**	72	**29**	**0**	**3**
35	WF9×B37	76	23	75	**90**	**100**	74	35	**0**	9
36	B41×Oh7A	53	27	70	70	**98**	72	38	**1**	**2**
	Average	75	23	75	84	98	73	34	0	5
	C — Inbred lines crossed with (WF9 × B37)									
1	R71	**95**	24	78	**90**	**95**	72	**26**	**2**	**5**
2	R74	**88**	24	76	**94**	**98**	72	**27**	**0**	**4**
4	R76	70	22	78	**92**	**93**	77	32	**1**	22
5	R78	69	23	78	73	**100**	**69**	**27**	**0**	**11**
6	R84	42	22	72	**93**	**100**	71	33	**0**	17
7	R101	**89**	23	**80**	**95**	**97**	**68**	**28**	**0**	**9**
9	R109B	58	24	75	**90**	92	72	**30**	**0**	**10**
10	R112	**76**	22	**79**	**86**	**93**	70	**27**	**1**	14
11	R113	61	**21**	72	**93**	**98**	**66**	**29**	**0**	14
14	R134	**81**	23	76	**99**	**93**	76	33	**1**	**4**
16	R151	**97**	23	**79**	**87**	**98**	78	34	**0**	**5**
17	R154	**91**	22	**81**	75	**96**	76	**30**	**2**	**8**
18	R158	64	**20**	75	**97**	**97**	81	33	**3**	**8**
19	R159	51	23	72	**97**	**97**	71	**27**	**0**	**12**
21	R168	**80**	**21**	**81**	**98**	**96**	**67**	**25**	**0**	**12**
22	R172	**76**	23	77	**98**	**99**	70	**31**	**0**	**7**
25	R182	53	**20**	74	**96**	**99**	73	**26**	**0**	**4**
27	R192	**82**	23	76	**95**	**99**	73	**30**	**1**	**12**
28	R193	63	**21**	75	**82**	**97**	71	**25**	**1**	**6**
29	R194	**76**	26	77	**92**	**99**	**69**	32	**1**	**4**
31	R196	69	23	76	**84**	**99**	76	33	**0**	**7**
32	R197	**87**	24	77	78	**94**	76	34	**3**	**2**
	Average	73	22	76	90	97	72	30	1	9

(Table is concluded on next page)

Table 4. — Concluded

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
	D — single crosses									
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*
34	WF9×Oh43	**98**	**20**	**80**	**91**	**95**	70	**24**	**1**	**0**
35	WF9×B37	60	22	72	**95**	**94**	71	**30**	**0**	13
36	B41×Oh7A	53	26	70	61	**100**	72	38	**1**	**10**
	Average	70	23	74	82	96	71	31	1	8
	E — Inbred lines crossed with (B41 × Oh7A)									
1	R71	**104**	26	**80**	**90**	**99**	74	38	**2**	**1**
2	R74	**90**	25	78	**88**	**100**	72	**34**	**0**	**5**
4	R76	75	25	76	80	**100**	79	46	**0**	17
5	R78	67	25	**81**	60	**98**	71	**36**	**0**	18
6	R84	42	**22**	75	**95**	**98**	70	38	**1**	**10**
7	R101	52	24	**80**	**97**	**100**	70	**32**	**1**	15
9	R109B	49	27	74	**92**	**97**	74	39	**0**	**6**
10	R112	66	23	**80**	**88**	**99**	70	**32**	**1**	14
11	R113	41	25	73	**97**	**100**	**59**	37	**0**	17
14	R134	71	26	77	**91**	**98**	74	37	**1**	**6**
16	R151	**92**	25	**80**	**90**	**98**	78	37	**0**	**13**
17	R154	**93**	23	**82**	46	**100**	74	37	**0**	**2**
18	R158	54	23	**79**	**98**	**98**	81	40	6	**4**
19	R159	40	25	73	**97**	**100**	70	**36**	**0**	**4**
21	R168	**79**	**21**	**83**	**96**	84	71	37	**0**	18
22	R172	73	23	**80**	**91**	**95**	73	37	**1**	**9**
25	R182	59	23	77	**99**	**99**	71	**35**	**1**	**3**
27	R192	69	26	75	72	**100**	75	39	**0**	**10**
28	R193	67	23	77	**86**	**99**	74	**33**	**2**	**5**
29	R194	49	26	75	**89**	**98**	72	37	**2**	**5**
31	R196	70	24	74	**88**	**97**	74	37	**0**	**4**
32	R197	61	26	77	**89**	**91**	71	37	3	**4**
	Average	66	24	78	87	97	73	37	1	9
	F — Single crosses									
34	WF9×Oh43	72	**22**	77	77	**94**	70	**31**	**0**	**9**
35	WF9×B37	75	**21**	78	81	**96**	70	**32**	**0**	**5**
36	B41×Oh7A	46	27	72	84	**100**	71	38	**0**	**6**
	Average	64	23	76	81	97	70	34	0	6
	G — Mean of inbred lines crossed with three testers									
1	R71	**97**	23	79	**90**	**98**	71	**32**	2	**3**
2	R74	81	24	77	**91**	**99**	70	**30**	**0**	**3**
4	R76	77	23	77	84	94	78	39	2	15
5	R78	71	23	80	67	**98**	70	**32**	**1**	11
6	R84	51	22	75	**92**	**99**	70	35	**1**	11
7	R101	74	22	80	**91**	**99**	69	**31**	**1**	11
9	R109B	62	25	76	**92**	92	72	34	**0**	**6**
10	R112	77	22	80	83	**96**	69	**29**	**1**	12
11	R113	57	22	73	**91**	**98**	**64**	**32**	**0**	12
14	R134	80	23	77	**94**	**95**	77	36	**1**	**4**
16	R151	**97**	23	80	**89**	**98**	77	35	**0**	**8**
17	R154	**93**	22	**82**	61	**98**	74	33	**1**	**5**
18	R158	65	21	79	**96**	**98**	79	36	5	**5**
19	R159	49	23	74	**97**	**98**	**68**	**30**	**0**	**6**
21	R168	83	**20**	**83**	**93**	93	69	**30**	**1**	11
22	R172	81	22	80	**93**	**98**	72	35	**0**	**7**
25	R182	58	21	77	**96**	**98**	72	**31**	**1**	**3**
27	R192	79	24	77	84	**99**	73	**32**	**0**	9
28	R193	69	22	77	81	**98**	72	**29**	**1**	**5**
29	R194	68	25	77	86	**99**	71	34	**1**	**4**
31	R196	72	22	76	**88**	**98**	74	35	**1**	**5**
32	R197	81	24	78	84	93	73	36	2	**3**
	Average	74	23	78	87	97	72	33	1	7
	H — Mean of three single-cross testers									
34	WF9×Oh43	89	**20**	79	87	**95**	71	**28**	**0**	**4**
35	WF9×B37	70	22	75	**89**	**97**	72	**32**	**0**	9
36	B41×Oh7A	51	27	71	72	**99**	72	38	**1**	**6**
	Average	70	23	75	83	97	72	33	0	6

Table 5. — THREE-WAY CROSSES AND STANDARDS

Tested in South-Central Illinois, 1959

(Data in **boldface** were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
	A — Inbred lines crossed with (WF9 × Oh43)									
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*
1	R71	89	**19**	82	**96**	**100**	**60**	**25**	**3**	**4**
2	R74	79	20	81	**91**	**98**	65	**26**	**1**	**0**
4	R76	**97**	20	81	**94**	**98**	70	31	**3**	17
5	R78	88	20	80	**91**	**98**	**62**	**28**	**4**	**7**
6	R84	**96**	20	79	**89**	**100**	**64**	30	**4**	**3**
7	R101	83	**19**	81	**95**	**100**	**63**	**29**	**1**	**6**
9	R109B	90	21	81	**100**	**100**	65	**29**	**1**	**6**
10	R112	**96**	**19**	82	**92**	**98**	67	**27**	**0**	**6**
11	R113	55	20	76	**97**	**98**	**60**	**27**	**0**	**1**
14	R134	**100**	20	80	**95**	**99**	70	35	**1**	**3**
16	R151	**106**	21	**83**	**94**	**100**	65	30	**1**	**1**
17	R154	95	**19**	**83**	85	**100**	**62**	**27**	**1**	**1**
18	R158	75	**19**	81	**97**	**98**	68	**29**	10	**5**
19	R159	89	20	81	**95**	**100**	66	**27**	**1**	**8**
21	R168	89	**18**	**85**	**99**	**100**	65	**27**	**3**	**3**
22	R172	95	20	**83**	**99**	**98**	65	31	**3**	**3**
25	R182	77	**18**	82	**100**	**100**	68	30	**4**	**1**
27	R192	93	20	79	**99**	**100**	**64**	**29**	**0**	18
28	R193	**98**	20	81	**95**	**96**	69	31	**0**	**1**
29	R194	**99**	21	82	**94**	**100**	65	32	**0**	**3**
31	R196	**96**	20	81	**99**	**98**	69	34	**1**	**1**
32	R197	**102**	21	**83**	**94**	**100**	66	33	8	**3**
	Average	90	20	81	94	99	65	29	2	5
	B — Single crosses									
34	WF9×Oh43	**100**	**19**	**84**	**99**	**98**	65	**26**	**0**	**5**
35	WF9×B37	83	**19**	78	**100**	**100**	66	31	5	24
36	B41×Oh7A	**116**	22	80	84	**100**	71	34	**2**	**2**
	Average	100	20	81	94	99	67	30	2	10
	C — Inbred lines crossed with (WF9 × B37)									
1	R71	**97**	22	79	**96**	**100**	74	37	**1**	**1**
2	R74	**100**	19	81	**99**	**100**	**66**	**29**	**5**	**3**
4	R76	81	20	78	**100**	**100**	71	**33**	**3**	15
5	R78	89	20	81	**94**	**93**	**66**	**31**	**0**	**6**
6	R84	89	19	81	89	**100**	**63**	**31**	**0**	**6**
7	R101	84	19	82	**91**	**100**	**63**	**28**	**1**	9
9	R109B	**94**	20	81	**93**	**95**	**66**	**29**	**1**	**3**
10	R112	**93**	19	82	**96**	**100**	**66**	**31**	**0**	**8**
11	R113	67	20	77	**100**	**100**	**66**	**32**	**0**	**4**
14	R134	**104**	20	78	**97**	**96**	76	37	5	**0**
16	R151	**105**	21	83	**94**	**96**	75	**34**	**3**	**8**
17	R154	**101**	20	83	**96**	**100**	**66**	**29**	**1**	**4**
18	R158	71	19	80	**98**	**100**	72	**33**	**4**	**5**
19	R159	87	19	78	**99**	**100**	**67**	**31**	**0**	10
21	R168	84	19	80	**98**	**100**	**67**	**33**	**1**	**5**
22	R172	**101**	19	82	**99**	**100**	**65**	**32**	**1**	**4**
25	R182	72	**18**	81	**100**	**96**	**64**	**29**	**0**	**3**
27	R192	**97**	21	80	**96**	**100**	73	**32**	**0**	15
28	R193	90	19	82	**96**	**100**	72	**33**	**1**	**3**
29	R194	**101**	20	81	**93**	**100**	70	**30**	**0**	**3**
31	R196	79	19	79	**100**	**95**	**69**	36	**1**	**7**
32	R197	**103**	20	82	90	**96**	73	36	**1**	**3**
	Average	90	20	80	96	99	69	32	1	5

(Table is concluded on next page)

Table 5. — Concluded

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
	D — single crosses									
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*
34	WF9×Oh43	**106**	19	**85**	**95**	**100**	**65**	**30**	**1**	**1**
35	WF9×B37	88	19	79	**100**	**100**	71	**32**	**2**	15
36	B41×Oh7A	**102**	22	81	**91**	**95**	72	**34**	**3**	**1**
	Average	99	20	82	96	98	69	32	2	6
	E — Inbred lines crossed with (B41 × Oh7A)									
1	R71	**106**	22	82	**91**	**98**	**65**	33	**0**	**3**
2	R74	98	21	81	**100**	**98**	**63**	**26**	**0**	**3**
4	R76	**107**	20	81	**96**	**100**	77	39	**4**	21
5	R78	82	22	80	**90**	**99**	**62**	32	**1**	**1**
6	R84	83	20	80	**94**	**100**	68	34	**0**	**8**
7	R101	75	20	**83**	82	**99**	**65**	33	**0**	**5**
9	R109B	89	21	81	**99**	**100**	**67**	33	**1**	**1**
10	R112	90	20	81	**94**	**100**	**61**	**28**	**1**	**4**
11	R113	59	21	77	**99**	**99**	**63**	31	**0**	**0**
14	R134	**114**	21	78	**94**	**99**	78	38	**1**	**0**
16	R151	**112**	21	**85**	**92**	**96**	71	39	**3**	**4**
17	R154	88	20	**84**	71	**100**	**67**	33	**0**	**0**
18	R158	79	19	82	**96**	**98**	73	32	**1**	**0**
19	R159	90	22	80	**99**	**100**	70	34	**0**	15
21	R168	90	19	**84**	**94**	**100**	**64**	33	**1**	**6**
22	R172	**103**	19	**83**	**98**	**98**	**65**	32	**1**	**1**
25	R182	85	20	81	**98**	**100**	70	31	**1**	**0**
27	R192	**101**	23	82	82	**99**	74	36	**1**	12
28	R193	98	20	**83**	**89**	**100**	**66**	31	**0**	**1**
29	R194	94	21	81	**91**	**100**	69	35	**0**	**3**
31	R196	**107**	21	81	**98**	**100**	**66**	32	**3**	**1**
32	R197	**103**	21	81	80	**99**	**66**	34	8	**4**
	Average	93	21	81	92	99	68	33	1	4
	F — Single crosses									
34	WF9×Oh43	95	19	**86**	**95**	94	**63**	**26**	**0**	**1**
35	WF9×B37	74	19	80	**99**	**100**	**65**	**30**	**2**	12
36	B41×Oh7A	**108**	22	80	80	**100**	74	37	**0**	**1**
	Average	92	20	82	91	98	67	31	1	5
	G — Mean of inbred lines crossed with three testers									
1	R71	97	21	81	**95**	**99**	66	32	**1**	**3**
2	R74	93	20	81	**97**	**98**	65	**27**	**2**	**2**
4	R76	95	20	80	**97**	**99**	73	34	3	18
5	R78	86	21	80	**92**	96	**63**	30	**2**	**5**
6	R84	89	20	80	90	**100**	65	31	**1**	**5**
7	R101	80	19	82	90	**100**	**64**	30	**1**	7
9	R109B	91	21	81	**97**	**98**	66	30	**1**	**3**
10	R112	93	19	82	**94**	**99**	65	**29**	**0**	6
11	R113	60	20	76	**99**	**99**	**63**	30	**0**	**2**
14	R134	**106**	21	79	**95**	**98**	75	36	3	**1**
16	R151	**107**	21	84	**93**	**98**	70	34	**2**	**4**
17	R154	94	20	84	84	**100**	65	30	**1**	**2**
18	R158	75	19	81	**97**	**98**	71	31	5	**3**
19	R159	89	20	80	**98**	**100**	68	30	**0**	11
21	R168	88	19	83	**97**	**100**	65	31	**2**	**5**
22	R172	**100**	20	83	**98**	**98**	65	32	**2**	**3**
25	R182	78	19	81	**99**	**99**	67	30	**2**	**1**
27	R192	97	21	80	**92**	**100**	70	32	**0**	15
28	R193	95	20	82	**93**	**99**	69	32	**0**	**2**
29	R194	98	21	82	**93**	**100**	68	32	**0**	**3**
31	R196	94	20	80	**99**	**98**	68	34	**2**	**3**
32	R197	**102**	21	82	88	**98**	68	34	5	**3**
	Average	91	20	81	94	99	67	31	2	5
	H — Mean of three single-cross testers									
34	WF9×Oh43	**100**	19	85	**96**	**97**	**64**	**27**	**0**	**2**
35	WF9×B37	82	19	79	**99**	**100**	67	31	3	17
36	B41×Oh7A	**103**	22	80	85	**98**	72	35	**2**	**1**
	Average	97	20	81	93	98	68	31	2	7

Table 6. — STATE-WIDE PERFORMANCE OF ILLINOIS THREE-WAY CROSSES AND STANDARDS

Tested in Illinois, 1959

(Data in **boldface** were not statistically different from the best performance for that characteristic)

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
A — Inbred lines crossed with (WF9 × Oh43)										
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*
1	R71	98	22	82	**94**	**99**	71	**31**	**2**	**4**
2	R74	81	23	79	**92**	**98**	73	**31**	**0**	**1**
4	R76	98	23	79	81	94	80	39	6	9
5	R78	94	23	81	83	**96**	73	34	4	5
6	R84	86	22	79	87	95	73	37	4	6
7	R101	90	22	80	**90**	**99**	75	34	**1**	8
9	R109B	92	23	81	**97**	94	74	34	**1**	**3**
10	R112	100	21	82	**88**	**96**	76	**32**	**2**	8
11	R113	79	21	76	**88**	**98**	71	33	**0**	**3**
14	R134	**108**	23	79	**94**	95	82	39	**2**	**3**
16	R151	**114**	23	**83**	**89**	**99**	77	35	**2**	**3**
17	R154	**108**	22	82	78	**97**	76	34	**1**	**3**
18	R158	86	21	81	**94**	**99**	80	35	7	**3**
19	R159	84	23	79	**94**	**98**	72	**31**	**1**	**4**
21	R168	100	20	**84**	**92**	**99**	73	**32**	**2**	**3**
22	R172	**105**	22	82	**94**	**99**	76	36	**1**	**2**
25	R182	83	21	81	**96**	**96**	78	35	4	**3**
27	R192	93	23	79	**91**	**99**	77	34	**1**	12
28	R193	97	22	80	87	**97**	78	33	**1**	**3**
29	R194	92	24	80	82	**99**	75	36	**1**	**3**
31	R196	92	22	80	**96**	**99**	78	38	3	**2**
32	R197	105	25	81	**88**	**97**	77	38	5	**2**
	Average	95	22	80	90	97	76	35	2	4
Tester WF9×Oh43		98	22	81	**93**	**97**	75	**32**	**2**	**3**
B — Inbred lines crossed with (WF9 × B37)										
1	R71	98	25	77	**95**	**95**	80	37	**3**	**3**
2	R74	94	24	78	**98**	89	77	**34**	**3**	**5**
4	R76	81	23	77	**94**	**96**	82	39	**3**	16
5	R78	87	24	79	84	**96**	77	**33**	**1**	9
6	R84	68	22	76	90	**99**	77	38	**1**	12
7	R101	86	22	79	**92**	**98**	**74**	**34**	**0**	**8**
9	R109B	85	24	78	**94**	**95**	78	**35**	**1**	**6**
10	R112	93	22	80	**93**	**98**	**76**	**35**	**2**	9
11	R113	78	22	75	**95**	**99**	**74**	37	**1**	**6**
14	R134	97	24	76	**97**	**95**	83	39	6	**4**
16	R151	**111**	24	80	90	**98**	84	40	**3**	**4**
17	R154	**105**	22	**81**	83	**98**	80	37	**1**	**4**
18	R158	75	**21**	77	**95**	**95**	84	38	4	**6**
19	R159	78	23	76	**97**	**99**	77	**36**	**0**	9
21	R168	97	**21**	80	**98**	**98**	**75**	**34**	**0**	**8**
22	R172	95	23	78	**97**	**100**	**76**	37	**1**	**4**
25	R182	69	**21**	77	**98**	88	79	**35**	**1**	**5**
27	R192	94	24	77	**93**	**98**	82	37	**0**	13
28	R193	83	23	78	90	**99**	79	**35**	**2**	**4**
29	R194	95	25	79	**93**	**98**	78	38	**1**	**5**
31	R196	88	23	77	**93**	**98**	81	40	**1**	**7**
32	R197	**105**	25	79	82	**96**	81	41	**2**	**3**
	Average	89	23	78	93	97	79	37	2	7
Tester WF9×B37		79	23	76	**95**	**99**	77	**36**	**2**	12

(Table is concluded on next page)

Table 6. — Concluded

Code	Entry	Acre yield	Moisture in grain	Shelling	Erect plants	Stand	Height		Dropped ears	Smut
							Plant	Ear		
	C — Inbred lines crossed with (B41 × Oh7A)									
		bu.	*perct.*	*perct.*	*perct.*	*perct.*	*in.*	*in.*	*perct.*	*perct.*
1	R71	97	26	80	**90**	**98**	77	40	**1**	**3**
2	R74	**102**	25	79	**93**	**99**	76	**36**	**0**	**3**
4	R76	96	25	77	84	**100**	85	46	**2**	16
5	R78	70	26	79	70	**99**	75	39	**0**	9
6	R84	55	24	77	**90**	**99**	76	42	**2**	9
7	R101	69	23	80	86	**99**	76	39	**1**	8
9	R109B	81	26	78	**95**	**99**	78	42	**1**	**5**
10	R112	82	24	80	**92**	**99**	74	**35**	**2**	9
11	R113	59	24	76	**97**	**99**	**70**	39	**0**	**6**
14	R134	94	26	78	**90**	**99**	82	42	5	**3**
16	R151	**109**	25	**81**	86	**98**	82	43	4	**6**
17	R154	96	23	**81**	66	**100**	79	41	**2**	**1**
18	R158	75	23	80	**96**	**97**	84	41	4	**1**
19	R159	67	27	76	**97**	**100**	78	39	**0**	8
21	R168	93	22	**83**	**96**	95	75	39	**1**	10
22	R172	91	23	**81**	**92**	**97**	78	41	**1**	**5**
25	R182	79	23	79	**97**	**99**	78	**38**	**2**	**1**
27	R192	80	26	77	80	**99**	81	42	**0**	11
28	R193	84	24	78	87	**100**	77	**37**	3	**2**
29	R194	63	27	78	**91**	**99**	77	41	**2**	**4**
31	R196	85	24	77	**90**	**98**	78	41	**2**	**2**
32	R197	90	26	78	84	**97**	76	41	4	**3**
	Average	83	25	79	88	99	78	40	2	6
Tester B41×Oh7A		68	28	74	68	**98**	79	41	**1**	**3**
	D — Mean of inbred lines crossed with three testers and grown at three locations									
1	R71	98	25	80	**93**	**97**	76	36	**2**	**3**
2	R74	93	24	79	**94**	95	75	**34**	**1**	**3**
4	R76	92	24	78	86	**97**	82	**41**	4	13
5	R78	83	24	80	79	**97**	75	**35**	**2**	8
6	R84	70	23	78	89	**98**	75	39	3	9
7	R101	81	22	80	89	**99**	75	**35**	**1**	8
9	R109B	86	24	79	**95**	96	76	37	**1**	**4**
10	R112	92	23	81	91	**98**	75	**34**	**2**	9
11	R113	72	22	76	**93**	**99**	**72**	36	**0**	**5**
14	R134	100	24	78	**93**	96	82	40	4	**3**
16	R151	**111**	24	81	88	**98**	81	39	3	**5**
17	R154	103	22	**82**	76	**98**	78	37	**2**	**3**
18	R158	79	22	79	**95**	**97**	83	38	5	**3**
19	R159	76	24	77	**96**	**99**	76	36	**1**	7
21	R168	97	21	**82**	**95**	**97**	74	**35**	**1**	7
22	R172	97	23	80	**94**	**99**	76	38	**1**	**4**
25	R182	77	22	79	**97**	94	78	36	**2**	**3**
27	R192	89	24	78	88	**99**	80	38	**0**	12
28	R193	88	23	79	88	**99**	78	**35**	**2**	**3**
29	R194	84	25	79	89	**99**	76	38	**1**	**4**
31	R196	89	23	78	**93**	**98**	79	39	**2**	**4**
32	R197	100	25	79	85	**97**	78	40	4	**3**
	Average	89	23	79	90	97	77	37	2	6
Average of 3 testers		82	24	77	85	**98**	77	36	**2**	6

Table 7. — Information on Illinois I.

(Three-year averages, 1957-1959, single replication per year; small plots and limited enviro mental conditions make it advisable to use these data only as approximate guides)

Inbred line	Erect plants	Days to pollination	Ear height	Helminthosporium		Rust cover[3]	Diplodia stalk rot[4]	Smut	Desirability			Cob color	Special characteristics
				Maydis[1]	Turcicum[2]				Plant		Ear		
									Early	Late			
Illinois inbreds released in 1960													
	perct.		*in.*	*score*[5]	*score*[5]	*perct.*	*score*[5]	*perct.*	*score*[5]	*score*[5]	*score*[5]		
R74	100	72	28	0	2.0	40	4.0	16	3.7	3.3	2.7	R	Corn borer resista
R101	95	72	28	3.0	4.5	5	5.0	15	3.3	2.7	3.0	R	
R103	100	75	30	3.0	4.0	5	2.0	11	3.3	3.0	3.3	R	
R105	64	76	37	...	4.5	30	3.0	2	3.0	2.7	2.7	R	
R112	96	72	22	2.0	2.0	20	3.5	4	3.3	3.3	2.7	R	Corn borer resista
R134	98	75	38	1.0	.8	1	2.0	2	2.3	2.0	2.0	W	Pale-yellow seed color
R138	75	73	38	1.0	3.0	1	3.5	0	3.3	3.3	2.0	R	Genetic restorer fo "T" male sterility
R151	83	69	30	4.0	3.0	1	6.0	20	3.0	3.3	3.0	R	
R153	81	71	32	2.0	2.0	20	2.0	2	3.0	3.0	3.0	R	
R154	100	70	33	2.0	3.0	5	4.0	8	3.0	2.0	2.0	R	
R158	82	70	33	2.0	3.8	5	5.5	0	2.3	3.3	1.0	R	High oil and prote
R159	97	73	33	2.0	2.5	50	5.0	13	2.3	2.3	3.0	W	
R172	95	71	28	1.0	3.0	5	6.0	3	3.3	3.3	2.3	R	Corn borer resista
R174	100	72	29	1.0	1.5	10	2.5	14	3.0	2.3	3.0	R	
R177	100	70	22	2.0	3.0	60	3.0	0	3.0	3.3	3.7	R	
R182	100	67	20	2.0	2.5	5	5.0	5	3.0	3.3	3.3	R	High oil
R192	100	73	31	2.0	3.5	10	5.0	41	3.3	3.0	2.0	R	
R193	100	70	28	2.0	2.5	1	2.5	20	3.3	3.0	2.0	R	High oil and prote
R194	97	72	29	3.0	4.0	10	5.0	5	3.0	3.0	2.3	W	
R196	100	79	35	1.0	2.0	10	2.5	4	3.0	3.3	2.0	R	High oil and prote
R197	100	75	33	2.0	2.0	10	3.0	7	2.7	2.3	1.3	W	High oil and prote
Illinois inbreds released prior to 1960													
A	93	73	17	...	...	20	...	1	2.3	3.3	2.7	R	
Hy2	100	73	24	...	...	1	...	0	3.3	2.7	2.7	R	
R2	95	72	22	...	...	5	...	0	2.7	2.7	2.7	R	
R4	92	74	23	...	...	5	...	0	3.0	3.3	2.7	R	
M14	92	70	19	...	...	5	...	9	3.0	3.3	3.0	R	
R30	100	74	24	...	...	5	...	1	2.7	2.0	2.0	W	
R53	67	62	14	...	...	..	...	8	4.3	4.3	3.3	R	
R59	95	75	22	...	...	10	...	2	2.7	3.0	1.3	R	
R61	100	75	28	...	...	10	...	0	2.3	2.0	3.0	R	
R71	100	74	22	2.0	3.0	30	3.0	4	2.3	2.7	3.0	R	Corn borer resista
R75	85	71	29	2.0	2.5	10	3.0	9	2.7	3.3	4.0	W	High oil
R76	62	75	48	2.0	3.0	20	4.5	15	3.0	3.3	3.0	R	High oil and prote
R78	87	74	25	2.0	1.0	5	4.0	5	2.7	3.0	3.0	W	High oil and prote
R84	97	70	41	2.0	3.8	40	3.0	49	3.3	3.3	3.5	W & R	High oil
90	100	75	18	...	...	1	...	3	3.0	2.7	3.7	R	
R109B	90	72	30	1.0	1.0	1	3.0	7	3.0	3.3	3.0	R	Corn borer resista
R113	86	70	22	2.0	3.5	20	4.0	12	3.0	3.0	3.0	R	Corn borer resista
R168	98	66	25	1.0	2.0	40	5.5	16	3.0	3.0	2.5	R	Corn borer resista
4226	86	69	30	...	...	20	...	41	3.7	3.7	2.7	R	
5120B	100	79	24	...	...	1	...	12	3.3	2.7	3.7	R	
Selected widely used out-of-state inbreds													
C103	98	74	32	0	.8	1	1.5	0	3.0	3.0	3.0	R	
WF9	82	69	31	3.0	4.0	25	4.5	2	3.0	3.3	2.0	R	
38-11	74	75	36	2.0	2.5	1	2.5	4	2.0	3.0	2.5	R	
B14	94	70	29	1.0	3.5	60	3.0	6	3.3	3.0	2.5	R	
K201	83	81	34	1.0	1.5	1	4.0	5	3.0	3.0	2.5	W	
Oh7	75	78	32	1.0	3.5	5	4.0	0	3.0	3.0	2.5	R	
Oh43	84	65	23	1.0	2.2	5	3.0	3	2.7	2.7	1.5	W	

Notes on diseases recorded by Dr. A. L. Hooker.

[1] 1959 data.

[2] 1958, natural infection; 1959, artificial infection.

[3] 1958 data.

[4] 1958-1959 data; heavy leaf blight infection in 1959 from artificial infection contributed to high rot score.

[5] A score of 1 is most desirable, a score of 6 is least desirable.

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